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	<b>GALLSTONE DISEASES: BILIARY COLIC/ACUTE CHOLECYSTITIS/ACUTE CHOLANGITIS</b>	10
	PATIENT: _____	
	RECORD #: _____ AGE: _____ SEX: _____	12
14	<b>I. Colelithiasis and Biliary Colic</b>	
	Transient obstruction of the cystic duct without acute inflam. or infection, can cause post-prandial abd. pain. Usually asymptomatic in 80% of patients	16
	Etiology Stone formation: (a) imbalance in the ratio of chol./lecithin/bile salts; (b) nucleating nidus; (c) bile stasis	18
	S and Sx's <input type="checkbox"/> Post-prandial abd. pain, may radiate to (R) subscapular area; abrupt onset, gradual relief <input type="checkbox"/> N/V <input type="checkbox"/> Fatty food intolerance (dyspepsia) <input type="checkbox"/> Tender RUQ (poss. palp. GB) <input type="checkbox"/> Flatulence	20
22	Diff. Acute Cholecystitis, Peptic Ulcer, MI, GERD	
	W/U <input type="checkbox"/> ABD U/S: may show gallstones <input type="checkbox"/> CXR <input type="checkbox"/> EKG: R/O MI <input type="checkbox"/> UGI series to R/O hiatal hernia or ulcer	24
	Tx <input type="checkbox"/> Dietary modification: avoid trigger foods (e.g., fatty foods) stones (e.g., Ursolol) <input type="checkbox"/> Pharmacologic dissolution of cholesterol <input type="checkbox"/> Lithotripsy and stone dissolution <input type="checkbox"/> Cholecystectomy: definitive and curative	26
	NB: Most stones are cholesterol stones (75%) and radiolucent; pigmented stones due to hemolysis (e.g., hyperbilirubinemia) are radiopaque	28
14	<b>II. Acute Cholecystitis</b>	
	Acute inflammation of the GB caused by a protracted stone in the cystic duct; can cause sepsis, GB necrosis or abscess	16
	Etiology Prolonged blockage of cystic duct; postobstructive distention → inflammation → infection → gangrene; can be acalculous: due to stasis, patients on TPN, post/Op., or chron. debilitation	18
	S and Sx's <input type="checkbox"/> RUQ pain longer duration than biliary colic arrest during deep palp. of RUQ (ilicits pain) <input type="checkbox"/> N/V <input type="checkbox"/> RUQ tenderness, (+) <input type="checkbox"/> May have icterus <input type="checkbox"/> Fever <input type="checkbox"/> Pain more severe and of Murphy's sign (inspir.)	20
	Diff. Biliary Colic, Cholangitis, GERD, MI, Acute Appendicitis, Peptic Ulcer, Pneumonia	22
	W/U <input type="checkbox"/> CBC ( WBC in the range of <input type="checkbox"/> U/S: may _____ stones, sludge, bile, perichol, fluid, thickened, GB wall <input type="checkbox"/> LFTs with mild hyper bilirubinemia (2-4 mg/dl); mild in alk. phosp. <input type="checkbox"/> HDA (Hepatic-Iminodiacetic acid) scan: failure of GB to image implies cholecystitis	24
	Tx <input type="checkbox"/> NPO <input type="checkbox"/> IV ABx (e.g., Mefoxin) <input type="checkbox"/> IVF <input type="checkbox"/> Pain management	26

FIG. 1A

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14 — **III. Acute Cholangitis**  
 Gallstone or biliary sludge block the CBD; can cause life-threatening septic shock — 16

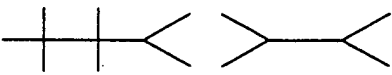
**Etiology** Bacterial infection of the biliary duct system caused by obstruction of the CBD — 18

21 — **S and Sx's** Charcot's Triad Reynold's Pentad  
☐ RUQ pain ☐ Charcot's Triad  
☐ Fever/chills ☐ Shock  
☐ Jaundice ☐ Neuro Sx's (altered mental status)

22 — **Diff.** Acute Cholecystitis, Acute Pancreatitis, Acute Hepatitis

**W/U** ☐ U/S: may show dilated ducts ☐ CBC: ↑ WBC, ↑ alk. phos. ↑ transaminases — 24  
☐ Blood cultures: positive in 50% of cases ☐ LFTs

**Tx** ☐ NPO ☐ IV Abx — Mefoxin ☐ If toxic cholangitis → ERCP can locate the — 26  
☐ IVF ☐ Pain management cause and decompress

30 — **Notes/Labs**   
**Vitals:** T \_\_\_\_\_ BP \_\_\_\_\_ P \_\_\_\_\_ R \_\_\_\_\_  
**EKG:** \_\_\_\_\_  
**ABG:** / / / / PT/PTT/INR: \_\_\_\_\_  
**U/A:** \_\_\_\_\_

**Meds** — 32

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34 — **ADDITIONAL NOTES**

FIG. 1B

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**COLORECTAL CANCER**

- Second most common cause of cancer in U.S. (after lung cancer)
- Mortality increases with age (peak 70-80 years)

PATIENT: \_\_\_\_\_

RECORD #: \_\_\_\_\_ AGE: \_\_\_\_\_ SEX: \_\_\_\_\_

**S and Sx's** ☐ Abdominal pain is the most common presenting complaint for all lesions

**I. Right Sided** ☐ Bulky fungating, ulcerating masses ☐ Weight loss, anorexia

☐ Present with anemia due to chronic blood loss ☐ Not obstructed because (R) colonic feces are fluid and the cecal wall is indispensible

**II. Left Sided** ☐ Obstructing masses on radiological exam often described as 'napkin ring' or 'apple core' in appearance ☐ Obstruction ((L) colon feces are more solid and the colon wall is less distensible)

☐ Altered bowel habits (constipation, decrease in stool caliber, obstipation) ☐ Blood streaked stools (mild) compared to IBD

**III. Rectal** ☐ BRBPR ☐ Tenesmus ☐ Must R/O hemorrhoids

**22** **Diff.** IBD, Diverticulosis, Hemorrhoids, PUD

**W/U** ☐ CBC (to check H/H for anemia) ☐ Abdominal CT/MRI for staging purposes (see Duke's Staging provided below)

☐ Sigmoidoscopy - Biopsy ☐ Check for METS:

☐ Colonoscopy - to R/O synchronous lesions as in UC (a) LFTs: Liver METS

☐ Barium enema (to visualize any missed lesions) (b) CXR: Lung METS

**Tx** ☐ Bowel prep. (pre-op): check oral Abx. ☐ bowel margins of 3-5 cm; 1" or 2" anastomosis

☐ check mechanical cleansing ☐ Radiotherapy or chemotherapy

☐ Surgical resection of colonic lesions →

**36** **F/U** ☐ Check CEA levels ☐ Digital rectal exams ☐ CXR

☐ Colonoscopy ☐ LFTs

**38** **Duke's Staging** (%'s are 5-year survival)

A. Limited to submucosa	> 90%
B1. Invades muscularis propria	70-80%
B2. Through muscularis propria	50-65%
C1. B1 and nodes	40-55%
C2. B2 and nodes	20-30%
D. Distant metastasis	< 5%

FIG. 2A

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FIG. 2B

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**PEPTIC ULCER DISEASE (PERFORATION)**

PATIENT: \_\_\_\_\_

RECORD #: \_\_\_\_\_ AGE: \_\_\_\_\_ SEX: \_\_\_\_\_

**I. Duodenal Ulcer**

**Etiology**

- ☐ H. pylori in 95% of cases
- ☐ Other Risk Factors: Tobacco, EtOH, NSAIDs, Steroids, Caffeine

**S and Sx's**

- ☐ Epigastric pain: 'gnawing, burning'
- ☐ Pain 1-3 hours post-prand.
- ☐ Pain relieved by food
- ☐ Fever (w/perforation)
- ☐ ↓ Appetite

**Diff.**

**W/U**

**Tx**

**II. Gastric Ulcer**

**Etiology**

- ☐ H. pylori in 65% of cases
- ☐ Approx. 1/3 of cases from NSAIDs
- ☐ Other Risk Factors: Tobacco, EtOH, NSAIDs, Steroids, Caffeine

**S and Sx's**

- ☐ Epigastric pain worsened by food
- ☐ N/V (very common)
- ☐ ↓ Appetite

**Diff.**

**W/U**

**Medical Mgmt.**

**Surgical Indicat.**

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FIG. 3A

FIG. 3B

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**ACUTE APPENDICITIS**

PATIENT: \_\_\_\_\_ AGE: \_\_\_\_\_

RECORD #: \_\_\_\_\_ SEX: \_\_\_\_\_

**Etiology** Luminal obstruction which leads to inflammation of the appendix. Causes include: hyperplasia of lymphoid tissue; fecalith; foreign body; parasite

**S and Sx's**

<input type="checkbox"/> Pain in epigastrium (dull, vague, referred pain) usually for 1-12 hours <input type="checkbox"/> N/V follow pain (may have acute loss of appetite) <input type="checkbox"/> Low-grade fever (high-grade if perforation) <input type="checkbox"/> Pain localizes: RLQ-McBurney's Pt., 2/3 from umbilicus to ASIS; sharp pain caused by irritation of parietal peritoneum (somatic pain)	<input type="checkbox"/> Perforation: may be a transient decrease in pain which changes to diffuse and indirect <input type="checkbox"/> Rosving's sign: referred pain in RLQ with deep palpation of LLQ <input type="checkbox"/> Psoas sign: RLQ pain; ilicited with passive extension of the hip due to stretching of iliopsoas tendon <input type="checkbox"/> Obturator sign: RLQ pain, with passive internal rotation of the hip <input type="checkbox"/> Rectal exam elicits pain on (R) side
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**DIF.** Gastroenteritis (N/V before pain, poorly localized, no ↑ in WBCs), Intussuseption, PID (high for females, bilateral lower abdominal tenderness), IBD (previous Hx), Ectopic Pregnancy or Ovarian Cyst, Bowel Obstruction, Mesenteric Ischemia, Perforated Ulcer, Pancreatitis, UTI/Pyelonephritis

**W/U** Dx. based on H + P; Labs can be used to confirm but DO NOT R/O

<input type="checkbox"/> KUB: may show fecalith; loss of psoas shadow; free air (perforation) <input type="checkbox"/> CBC: mild leukocytosis with a (L) shift (> 75% PMNs); w/perforation high WBCs	<input type="checkbox"/> U/S: may show enlarged appendix or appendiceal abscess <input type="checkbox"/> U/A: to evaluate for UTI
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**Tx**

<input type="checkbox"/> NPO <input type="checkbox"/> IVF <input type="checkbox"/> NGT <input type="checkbox"/> ABx	<input type="checkbox"/> Early appendectomy to prevent perforation <input type="checkbox"/> If an abscess → conservative therapy: triple ABx Tx (Amp. Genta., Flagyl) and U/S or CT guided PCT drainage; elective appendectomy in 6-8 wks. following resolution of the acute episode
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FIG. 4A

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Labs/Notes

T

BP

P

R

EKG:

ABG: / / / / PT/PTT/INR:

U/A:

Meds

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ADDITIONAL NOTES

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FIG. 4B



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## MAJOR DEPRESSIVE DISORDER

PATIENT: \_\_\_\_\_

RECORD #: \_\_\_\_\_ AGE: \_\_\_\_\_ SEX: \_\_\_\_\_

**Epidemiology** Male/female ratio → 1:2; peak onset 20-40 years old; 3X higher risk with positive family history; lifetime prevalence 20% and 5% for the general population; 40,000-50,000 Americans die annually due to suicide and 70% of these suicides are associated with depressive illness. 12

**Etiology** Numerous postulates exist in the behavioral, cognitive and psychodynamic arenas. In addition, the biologic theories include hypotheses to support decreased catecholamines and abnormal neurotransmitter function (specifically 5-HT and norepinephrine). 44  
Predisposing factors include psychosocial stressors, chronic medical illness, substance abuse/dependence, childbirth. 18

### S and Sx's

**Mood Associated**  
☐ Low mood/sadness  
☐ Feelings of hopelessness, worthlessness, inadequacy  
☐ Anxiety  
☐ Apathy  
☐ Irritability  
☐ Anhedonia  
☐ ↓ Coping skills

☐ Social withdrawal/isolation  
☐ Suicidal thoughts

### Memory Related

☐ Poor concentration  
☐ Poor attention/focusing  
☐ ↓ Memory/recall  
☐ Cognitive difficulties

### Somatic Complaints

☐ Tearfulness  
☐ Headache  
☐ ↓ Sleep/insomnia  
☐ Hypersomnia (atypical)  
☐ Weight loss  
☐ Weight gain (atypical)  
☐ Fatigue  
☐ ↓ Appetite or appetite (atypical) 21

### Diff

Mood disorder due to a general medical condition (viral illness, endocrine abnormality, cardiopulmonary disease, renal disorder, cancer, nutritional deficiency, Parkinson's disease, multiple sclerosis), dysthymic disorder, dementia, adjustment disorder with depressed mood, general bereavement, substance-induced mood disorder, psychotic disorders, medication side-effect/adverse reaction (antihypertensives, steroids, methylidopa), seasonal affective disorder. 22

### W/U

☐ Labs: CBC (evaluate for anemia); chemistry panel (e.g., hypoglycemia can cause anxiety, agitation, poor concentration), serum Ca<sup>++</sup> (TCA<sup>++</sup> and ↓Ca<sup>++</sup> can cause depression), B12 (deficiency can cause fatigue, agitation, personality change), Folate LFTs, TFTs, (hypothyroidism may show low T<sub>4</sub>, T<sub>3</sub>, resin T<sub>3</sub>), U/A, urine toxicology screen, syphilis serology (VDRL or RPR)  
☐ CXR (cardiopulmonary disease can affect mental status)

☐ ECG (evaluate general cardiac electrical activity; changes from psychotropic medications such as prolonged PR, QT or QRS intervals; AV or bundle branch block)  
☐ Head CT (evaluate brain parenchyma, bony structures; check for brain abscess, tumors or stroke)  
☐ EEG (slowing may be evidenced due to tricyclic antidepressants) 24

### Tx

☐ Selective Serotonin Reuptake Inhibitors (SSRIs)  
☐ Tricyclic antidepressants  
☐ Monoamine Oxidase Inhibitors (MAOIs): atypical depression; usually reserved for depression which does not respond to other agents

☐ Adjunctive medications  
☐ Psychotherapy: various modalities available (e.g., psychodynamic); frequency varies depending on goals, monitoring for suicidality, ensure treatment adherence  
☐ ECT: refractory cases 26

FIG. 5A

FIG. 5B

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<b>DIAGNOSIS</b> _____	
<b>PATIENT:</b> _____	
<b>RECORD #:</b> _____	<b>AGE:</b> _____ <b>SEX:</b> _____
<b>Etiology</b> _____ _____ _____	
<b>S and Sx's</b>	<input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<b>Diff.</b>	_____ _____
<b>W/U</b>	<input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<b>Tx</b>	<input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____

FIG. 6A

FIG. 6B

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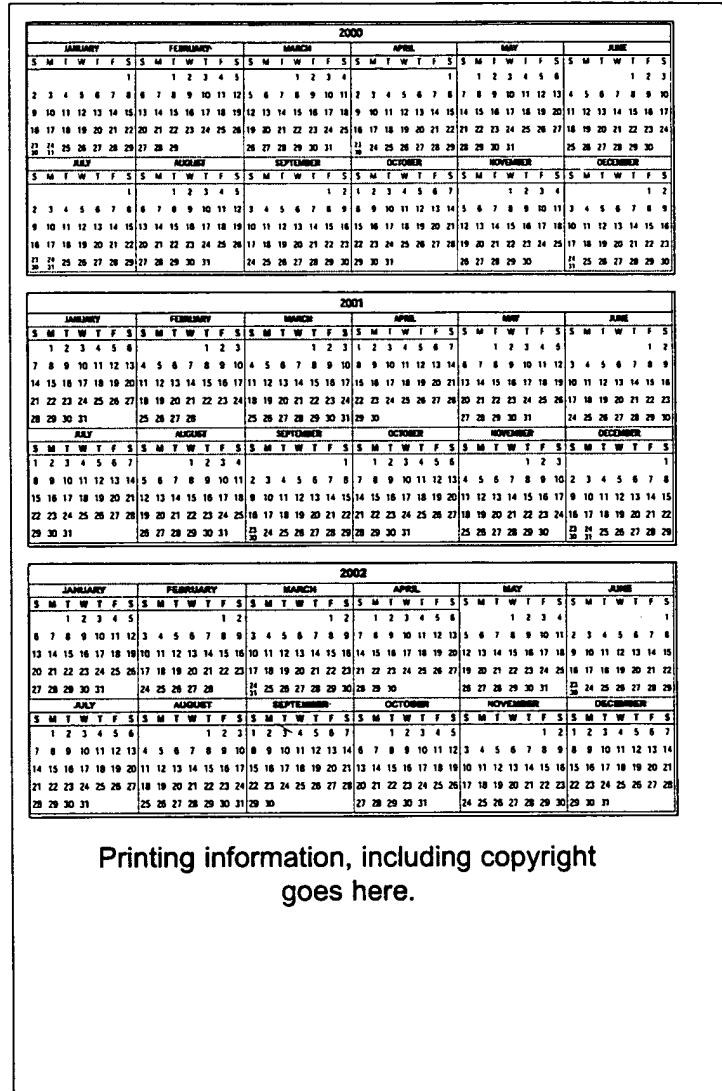


FIG. 7

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## NORMAL LAB VALUES/RANGES

### LAB CHEMISTRIES

Na 135-145 mEq/L	Cl <sup>-</sup> 98-106 mEq/L	BUN 7-18 mg/dL	Gluc. 70-115 mg/dL
3.5-5.1 mEq/L K	22-29 mEq/L HCO <sub>3</sub>	0.6-1.2 mg/dL CR	

Anion Gap	7-16 mEq/L
Osmolality	275-295 mOsm/kg
Calcium, ionized	4.65-5.28 mg/dL
Calcium, total	8.4-10.2 mg/dL
Magnesium	1.3-2.1 mEq/L
Phosphate	2.7-4.5 mg/dL
Iron	M 65-175, F 50-170 µg/dL
Iron, Sat.	M 20-60, F 15-50%
Ferritin	M 20-250, F 10-120 ng/mL
TIBC	250-450 µg/dL
Bilirubin, conj.	0-0.2 mg/dL
Bilirubin, total	0.2-1.0 mg/dL
Albumin	3.5-5.5 g/dL
Protein	6.0-8.0 g/dL
α <sub>1</sub> -Fetoprotein	< 10 ng/mL
Alk. Phos.	M 38-126, F 70-230 U/L
LDH	90-190 U/L
AST/SGOT	7-40 U/L
ALT/SGPT	7-40 U/L
GGT	M 9-50, F 8-40 U/L
CPK	M 38-174, F 26-140 U/L
CPK MB	< 5%
Amylase	25-125 U/L
Lipase, 10-140, >60y	18-180 U/L
C-peptide	0.70-1.89 ng/mL
LDL Cholesterol	< 130 mg/dL
HDL Cholesterol	M >29, F >35 mg/dL
Total Cholesterol	< 200 mg/dL
Triglycerides	M 40-160m F 35-135 mg/dL

### HEMATOLOGY

WBC 4.5-11.0 x 10 <sup>3</sup> per µL	Hemoglobin M 13.5-17.5 g/dL F 12.0-16.0 g/dL	Platelets 150-450 x 10 <sup>3</sup> per µL
	Hematocrit M 39-49% F 35-45%	

RBC	M 4.3-5.7, F 3.8-5.1 x 10 <sup>6</sup> /µL
MCV	80-100 fL
MCH	26-34 pg/cell
Reticulocyte Count	0.5-1.5%
Haptoglobin	16-185 mg/dL
Hemoglobin A <sub>1c</sub>	5.0-7.5%
Bleeding Time	2-7 min
PT	11-15 sec
aPTT	20-35 sec
ESR	M < 15, F < 20 mm/hr
CRP	< 8 mg/L (SI)
Neutrophils	57-67%
Segs.	54-62%
Bands	3-5%
Lymphocytes	23-33%
Monocytes	3-7%
Eosinophils	1-3%
Basophils	0-1%

### URINE VALUES

Albumin	10-100 mg/day
Creatinine	M 14-26, F 11-20 mg/kg/day
Creat. Clear.	M 90-136 mL/min/1.73 m <sup>2</sup> F 80-125 mL/min/1.73 m <sup>2</sup>
Glucose	< 0.5 g/day
Osmolality	50-1400 mOsmol/kg
Protein	10-150 mg/day
Specific Gravity	1.002-1.030
Urea Nitrogen	12-20 g/day
Uric Acid	250-750 mg/day
Volume (min.)	0.5-1.0 mL/kg/hr

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### ARTERIAL BLOOD GASES

pH 7.35- 7.45	PaCO <sub>2</sub> 35-45 mm Hg	PaO <sub>2</sub> 80-100 mm Hg	HCO <sub>3</sub> 21-27 mEq/L	O <sub>2</sub> Satur. 95-98%
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Base Excess: ±2 mEq/L

### CARDIAC PARAMETERS & FORMULAS

CO	Cardiac output (heart rate x stroke volume)	4-8 l/min
CI	Cardiac index (CO/BSA)	2.8-4.2 l/min/m <sup>2</sup>
MAP	Mean Arter Press [(Sys BP - Dias BP)/3] + Dias BP	80-100 mmHG
SVR	Systemic Vascular Resistance (MAP - CVP)x(80)/CO	800-1200 dyne/sec/cm <sup>5</sup>
PVR	Pulmonary Vascular Resistance (PAM - PCWP)x(80)/CO	45-120 dyne/sec/cm <sup>5</sup>
QT <sub>c</sub>	(QT / square root of RR)	0.38-0.42
Right Atrial Pressure	(central venous pressure)	0-8 mmHg
PAS	Pulmonary Artery Systolic Pressure	20-30 mmHg
PAD	Pulmonary Artery Diastolic Pressure	10-15 mmHg
PCWP	Pulmonary Capillary Wedge Pressure	8-12 mmHg (post-MI -16 mmHg)

Please note: it is strongly advised that you check normal lab values for your hospital, medical center or laboratory. These values can vary by location.

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FIG. 8

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# TITLE ?????

## THERAPEUTIC DRUG LEVELS

amikacin peak	20-35 mcg/ml
amikacin trough	<5 mcg/ml
carbamazepine	4-12 mcg/ml
cyclosporine trough	50-300 ng/ml
digoxin	0.8-2.2 ng/ml
gentamicin peak	5-10 mcg/ml
gentamicin trough	<2 mcg/ml
lidocaine	1-5 mcg/ml
lithium	0.6-1.2 meq/l
NAPA	10-30 mcg/ml
phenobarbital	15-40 mcg/ml
phenytoin	10-20 mcg/ml
primidone	5-12 mcg/ml
procainamide	4-8 mcg/ml
quinidine	1.5-3 mcg/ml
theophylline	10-20 mcg/ml
tobramycin peak	5-10 mcg/ml
tobramycin trough	<2 mcg/ml
valproic acid	50-100 mcg/ml
vancomycin trough	5-10 mcg/ml

## DAILY ELECTROLYTE REQUIREMENTS

Na <sup>+</sup> (as NaCl)	80-120 mEq/24h
Cl <sup>-</sup> (as NaCl)	80-120 mEq/24h
K <sup>+</sup>	50-100 mEq/24h
Ca <sup>2+</sup>	1-3 gm/24h
Mg <sup>2+</sup>	20 mEq/24h
Glucose	100-200 gm/24h
Unless otherwise indicated	

## CONVERSIONS

1 in = 2.54 cm	1g = 0.035274 oz
1 ft = 0.3048 m	1kg = 2.2046 lbs
1 mi = 1.6093 km	37.0 °C = 98.6 °F
1 fl oz = 29.573 mL	37.8.0 °C = 100.0 °F
1 oz = 28.350 g	38.0 8.0 °C = 100.4 °F
1 lb = 0.45359 kg	38.3 8.0 °C = 101.0 °F
1cm = 0.3937 in	38.9 8.0 °C = 102.0 °F
1 m = 3.2808 ft	39.0 8.0 °C = 102.2 °F
1 km = 0.6214 mi	39.4 8.0 °C = 103.0 °F
1 mL = 0.033814 fl oz	40.0 8.0 °C = 104.0 °F
	°F = (°C x 9/5) + 32
	°C = (°F - 32) x 5/9

## IV SOLUTIONS

Fluid	Glucose	Na <sup>+</sup>	K <sup>+</sup>	Cl <sup>-</sup>	mosm/L	Kcal/L
D5W	50g	0	0	0	252	170
D10W	100g	0	0	0	505	340
D50W	500g	0	0	0	2520	1700
½NS(0.45%NS)	0	77	0	77	154	0
NS(0.9%NS)	0	154	0	154	308	0
3% NS	0	513	0	513	1026	0
D5½NS	50g	38	0	38	329	170
D5¼NS	50g	77	0	77	406	170
D5NS	50g	154	0	154	560	170
LR	0	130	4	110	272	<10
D5LR	50	130	4	110	524	180
Albumin	0	145	0	145	unk	unk

## ABBREVIATIONS

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124

126

128

FIG. 9

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/

**MISCELLANEOUS** .....

130

132

The form consists of a rectangular box containing a series of horizontal lines for writing. At the top left of the box, the word "MISCELLANEOUS" is printed in bold, followed by a dotted line. On the right side of the box, a horizontal line points to the right, labeled "130". At the bottom of the box, a ruler is shown, labeled "132". The ruler has markings from 0 to 10 cm, with the numbers 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 printed above the markings. The ruler is oriented horizontally, with the 0 cm mark on the left and the 10 cm mark on the right.

FIG. 10



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PHONE NUMBERS

134

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INCH

The form is a rectangular sheet with a header section at the top. The header contains the text 'PHONE NUMBERS' followed by a dotted line. Below the header, there are 20 horizontal lines for writing. To the right of these lines is a vertical ruler with markings from 1 to 5 inches. The ruler is labeled 'INCH' at the bottom. A line labeled '134' points to the first horizontal line, and a line labeled '136' points to the ruler.

FIG. 11

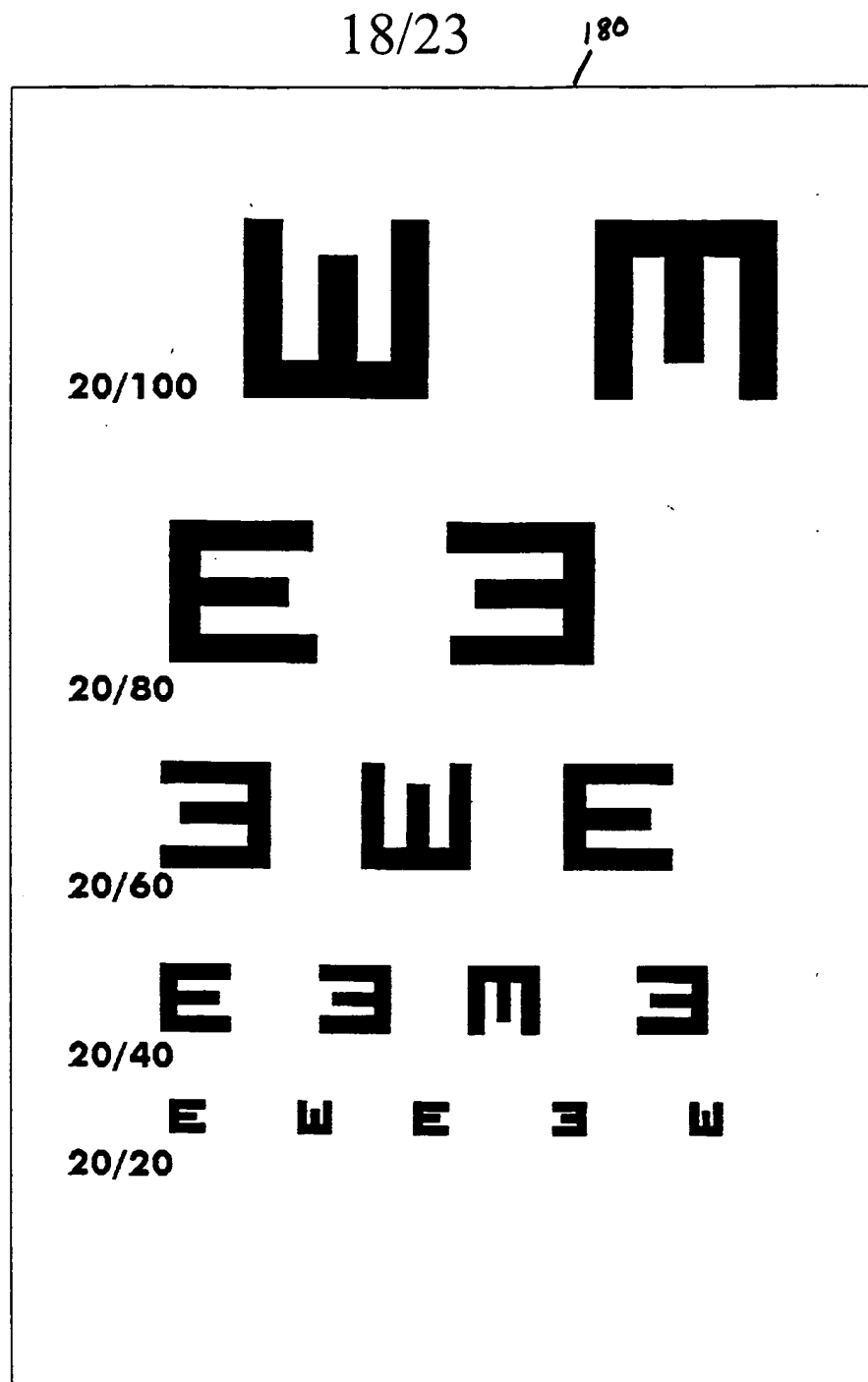


FIG. 12

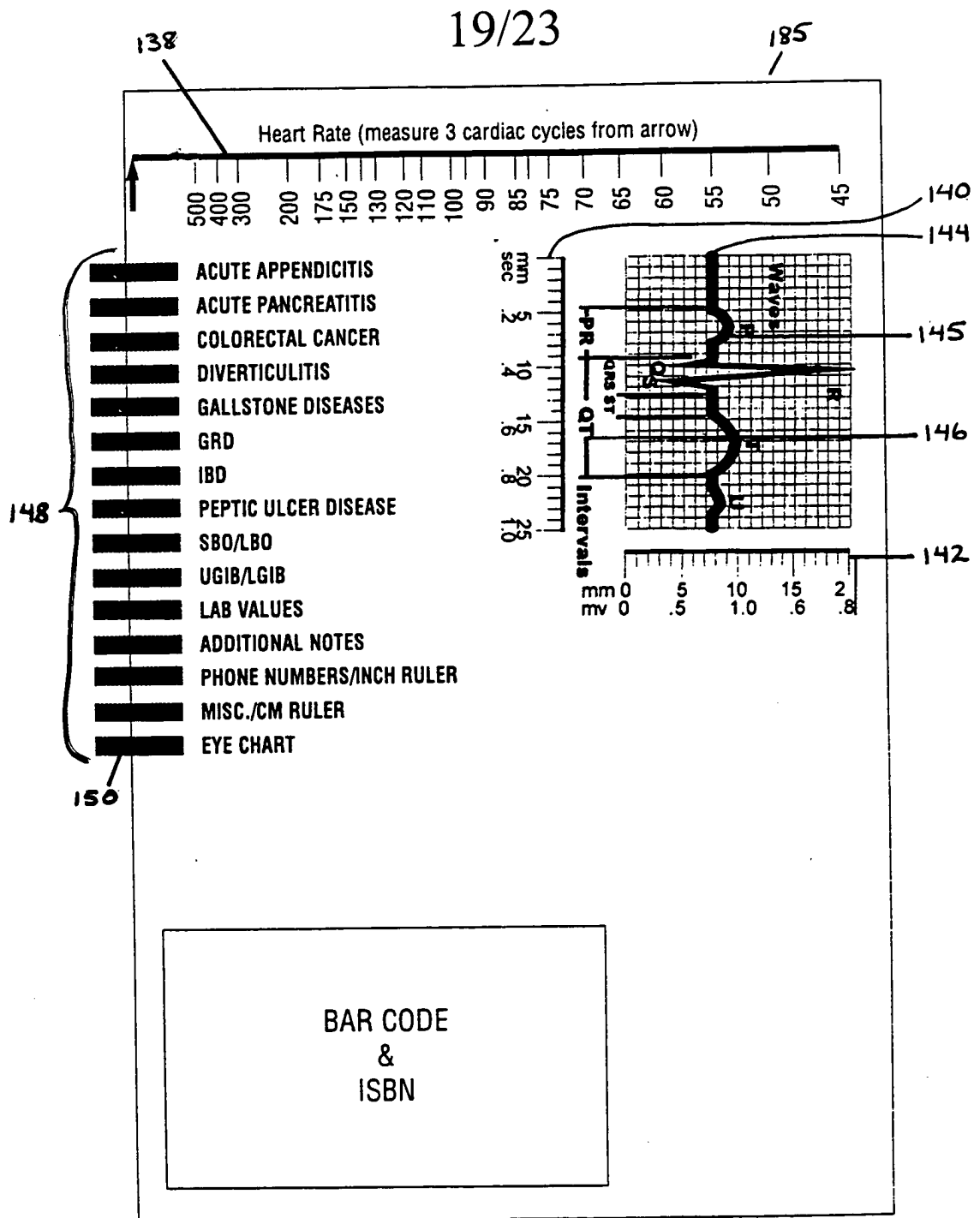
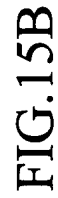
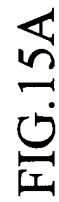


FIG. 13





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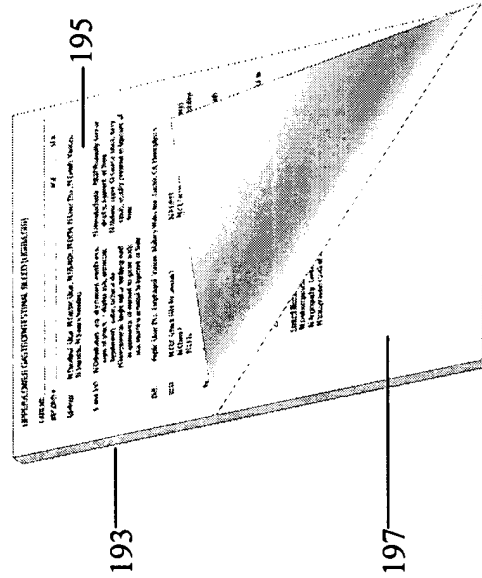


FIG. 15C

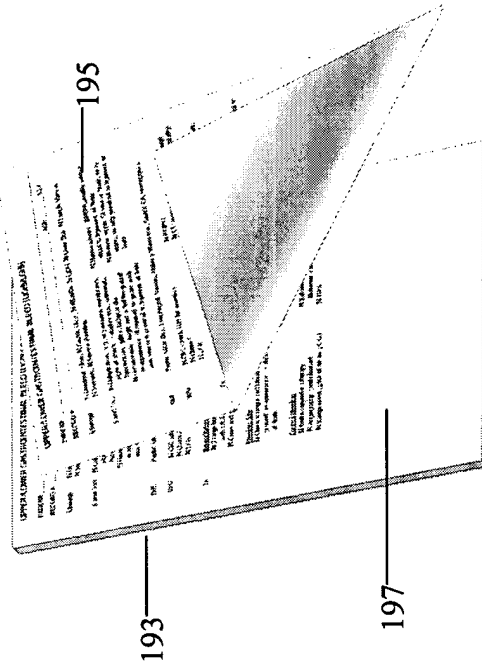


FIG. 15D

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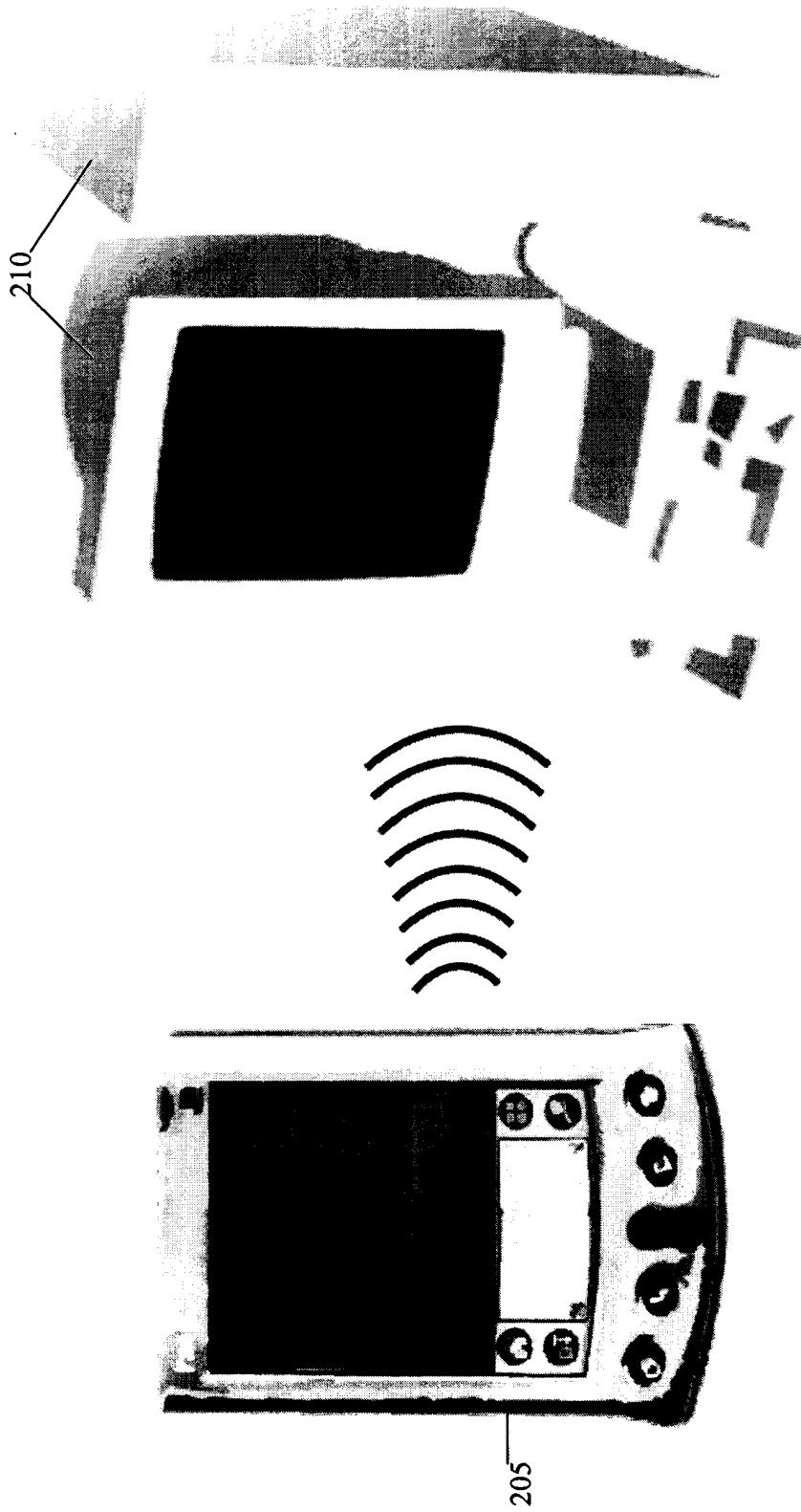


FIG.16